Delaware Nutrient Management Program

DELAWARE CONSERVATION PRACTICE STANDARD

MANURE TESTING

(Reported by No.)

DEFINITION

Practice of sampling and testing manure to determine its nutrient content.

PURPOSES

This practice may be applied for one or more of the following purposes:

1. Obtain the exact nutrient content of manure.
2. Check efficiency of digestion of nutrients.
3. Change livestock diets.
4. Reduce excess nutrients in waste.
5. Calculate manure application rates.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies where:

1. Producer aims to test and create a diet with more digestible nutrients.
2. Producers must assess nutrient concentrations in manures to calculate manure and fertilizer application rates to crop fields.
3. There is a need to assess nutrient concentrations in manures based on new livestock diets.

CONSIDERATIONS

It is important to collect manure samples properly to ensure that the nutrient content of the whole mass is represented. It is best to collect a representative sample of manure by taking small samples from multiple areas of the stockpile, lagoon, or other storage facility.

CRITERIA

Materials. Manure samples shall be collected and stored in nonmetallic containers, such as plastic buckets or freezer bags.

For liquid manure, ½ inch nonmetallic conduits (open on both ends) should be used to extract the manure. If the manure is in a lagoon, the manure samples should be collected in a small bottle at the end of a 10'-15' pole.

Protection. The nutrient content of manure can change during storage. It is important that sampling and analysis of the manure should be performed as close to the time of its application as possible to protect the sample from experiencing too great a loss of nutrients. Possible causes of changes in nutrient content are dilution, settling of solids and denser liquids, and gaseous loss.

REFERENCES

Guidelines for collection of samples and a description of sample analysis procedures can be viewed at:
http://www.mawaterquality.org/capacity_building/mid-atlantic%20nutrient%20management%20handbook/chapter9.pdf